

A NEW WATER BEETLE, *TROGLOCHARES ASHMOLEI*, N. GEN.,  
N. SP., FROM ECUADOR; THE FIRST KNOWN EYELESS  
CAVERNICOLOUS HYDROPHILID BEETLE  
(COLEOPTERA: HYDROPHILIDAE)

PAUL J. SPANGLER

Department of Entomology, Smithsonian Institution, Washington, D.C.  
20560.

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*Abstract.*—The first known eyeless cavernicolous hydrophilid, *Troglochares ashmolei*, n. gen., n. sp., is described. Illustrations of its various taxonomic structures are provided, and its relationships to similar genera are discussed. Couplets are given to interpolate this genus in a key to the related genera. This new water scavenger beetle was collected in Los Tayos Cave in Morona-Santiago Province, Ecuador.

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During a speleological investigation of several caves in Ecuador in 1976, Dr. Philip Ashmole and his associates collected some epigeal insects as well as cavernicolous animals. Among the specimens collected were some aquatic beetles belonging to the families Dytiscidae and Hydrophilidae. The dytiscids and those of one genus of hydrophilids were epigeal forms collected at the mouth of Los Tayos Cave in Morona-Santiago Province, Ecuador. However, a single eyeless female hydrophilid was collected inside the cave and this specimen represents the first known eyeless cavernicolous genus and species in the family Hydrophilidae. This new and unusual water scavenger beetle is described below.

HYDROBIINAE

*Troglochares* Spangler, NEW GENUS

Body form ovoid. Eyes absent. Clypeus expanded shelflike above and in front of bases of antennae; shallowly and broadly arcuate anteriorly. Labrum rounded laterally; shallowly and broadly emarginate anteriorly. Antenna 9-segmented; 2 proximal, 3 intermediate, 1 cupule, and 3 club segments. Maxillary palpus long, moderately robust, distinctly longer than antenna; 4-segmented; basal segment very short; 2nd (pseudobasal) segment slightly sinuous and robust, with convexity along posterior (or mesal) mar-

gin, slightly longer than 3rd segment; 4th segment slightly longer than 3rd segment and articulated toward mouth. Mentum strongly emarginate-foveate apicomediaally. Pronotum with lateral margins, anterolateral angles, and posterolateral angles broadly rounded. Prosternum not carinate. Mesosternum with a low, transversely arcuate ridge on posterior ¼. All femora densely pubescent on about basal ⅔; apices glabrous. Metatrochanter not elongated. Metatibia straight, elongate, without fringe of long natatory hairs. Tarsal formula 5-5-5. Elytron without sutural stria. Epipleuron moderately declivous along entire length. Last abdominal sternum not emarginate apicomediaally.

Type-species.—*Troglochares ashmolei*, new species.

Etymology.—*Troglochares* from troglodytes, G.—hole dweller, plus *chares* from related genus *Helochaeres*. Gender: masculine.

Remarks.—This new genus may be recognized immediately from all other described hydrophilid genera by the absence of eyes. However, the genus *Troglochares* keys to the subtribe Hydrobiae in d'Orchymont's (1942) revision of the Hydrobiini (now divided into several subfamilies) and to the genus *Helochaeres* in d'Orchymont's (1943) key to the genera in his subtribe Helocharae. From the genus *Helochaeres*, the genus *Troglochares* may be recognized by the following combination of characters: Eyes absent; last segment of the maxillary palpus slightly longer than the preceding segment; last abdominal sternum not emarginate apicomediaally; size, small. The following couplets interpolated in place of couplet 5 in d'Orchymont's (1943) key will separate *Troglochares* from *Helochaeres* and related genera:

- 5a. Antenna of 9 segments or less; 1st abdominal sternum not longitudinally carinate at base; last segment of maxillary palpus much shorter than the preceding segment, or if equal then the palps are very short and the overall size is small ..... 5b
- Antennae less than 9 segments; 1st abdominal sternum longitudinally carinate at base; last segment of maxillary palpus much longer than preceding segment and swollen apically; China and Indonesia ..... *Pelthydrus* d'Orchymont
- 5b. Eyes absent; last segment of maxillary palpus slightly longer than preceding segment; Ecuador ..... *Troglochares*, new genus
- Eyes present; last segment of maxillary palpus equal to or much shorter than preceding segment ..... 6
- 6. Form convex, never flattened; elytra striate or not; cosmopolitan ..... *Helochaeres* Mulsant
- Form very flattened, explanate, in form of a shield, not convex; maxillary palps extremely long; elytron with 10 narrow striae, finely punctate; anterior coxal cavities narrowly open posteriorly; Gabon ..... *Peltochaeres* Regimbart

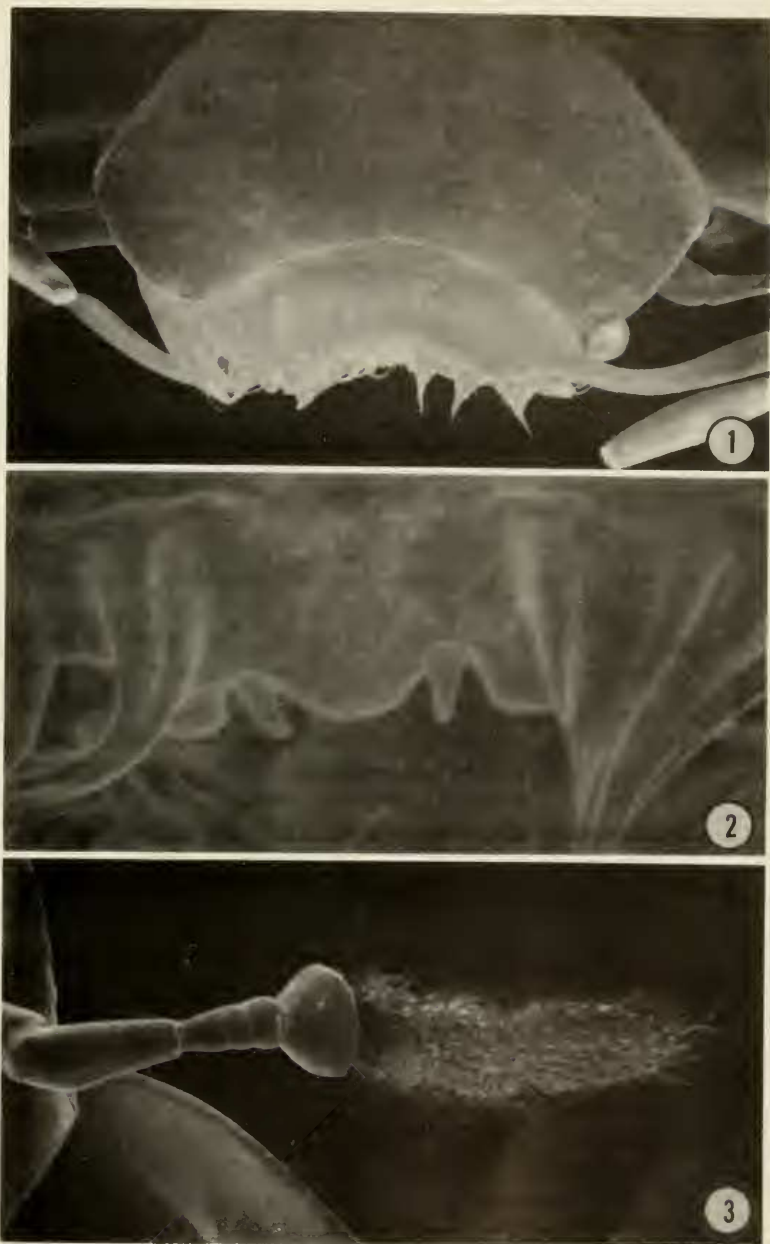
*Troglochaes ashmolei* Spangler, NEW SPECIES

Figs. 1-9

Holotype female.—Body form ovoid; length 1.9 mm; greatest width 1.1 mm at slightly posterior to midlength. Color entirely light brown.

*Head:* With dual punctuation; punctures on disc fine and separated by 2-4× their width; punctures on side of head coarse, sparse, separated by 1 or 2× their width. Clypeus, above and anterior to bases of antennae, broadly expanded, shelflike; shallowly arcuate anteromedially. Labrum (Fig. 1) with dual punctuation but punctures less coarse than those on head; rounded laterally; with transverse, preapical row of setae; shallowly and moderately broadly emarginate and minutely denticulate apicomediaally (Fig. 1). Eyes absent (Figs. 1, 4). Ventral surface of head behind bases of maxillae microalutaceous. Mentum emarginate-foveolate apicomediaally and moderately rugulose (Fig. 5). Antenna 9-segmented (Fig. 3); 2 basal, 3 intermediate, 1 cupule, and 3 club segments. Maxillary palpus 4-segmented; about as long as antenna; basal segment very short; 2nd (pseudobasal) segment longest, slightly longer than last segment; 3rd segment slightly shorter than last segment. Labial palpus small (Fig. 5); 3-segmented; 1st segment shortest, about ½ as long as 2nd segment; 2nd segment about as long as broader ultimate segment.

*Thorax:* Pronotum strongly convex; sides, posterolateral angles, and anterolateral angles broadly rounded; narrowly margined laterally; punctures on disc very fine and separated by about 1-3× their width; punctures denser and coarser laterally. Elytron convex; widest at midlength; finely but distinctly margined along entire length; surface very finely, densely punctate; discal punctures separated by about 1 or 2× their width; with 11 rows of slightly coarser punctures; sutural stria absent; epipleuron moderately declivous along entire length. Metathoracic flight wings absent. Scutellum an equal-sided triangle. Prosternum, mesosternum, and metasternum microreticulate and covered with short, moderately dense, golden hydrofuge pubescence; prosternum non-carinate and slightly convex on midline; mesosternum with a low transversely arcuate ridge on posterior ¼ (Fig. 8); metasternum with moderately raised pentagonal discal area. Fore-, mid-, and hindfemora densely covered with short, golden, hydrofuge pubescence on about basal ⅔; apices glabrous. Protibia (Figs. 6, 7) with longitudinal row of slender setae on middle of anterior surface; with a row of short spines and 1 long preapical spine laterally and 3 long spines apically. Foreleg with tarsal segments 1-4 about equal in length; last segment about as long as segments 1-4 combined. Metatrochanters small, not elongate. Metatibia not arcuate. Tarsus of midleg and hindleg each with basal segment short, slightly less than ½ as long as 2nd segment; 2nd segment about ⅓ longer than 3rd segment; 3rd and 4th segments short and subequal; last segment about as long as 3rd and 4th segments combined. Tarsal formula 5-5-5.



Figs. 1-3. *Troglochaes ashmolei*. 1. Head, 175 $\times$ . 2. Apicomedial margin of labrum, 1825 $\times$ . 3. Antenna, 300 $\times$ .

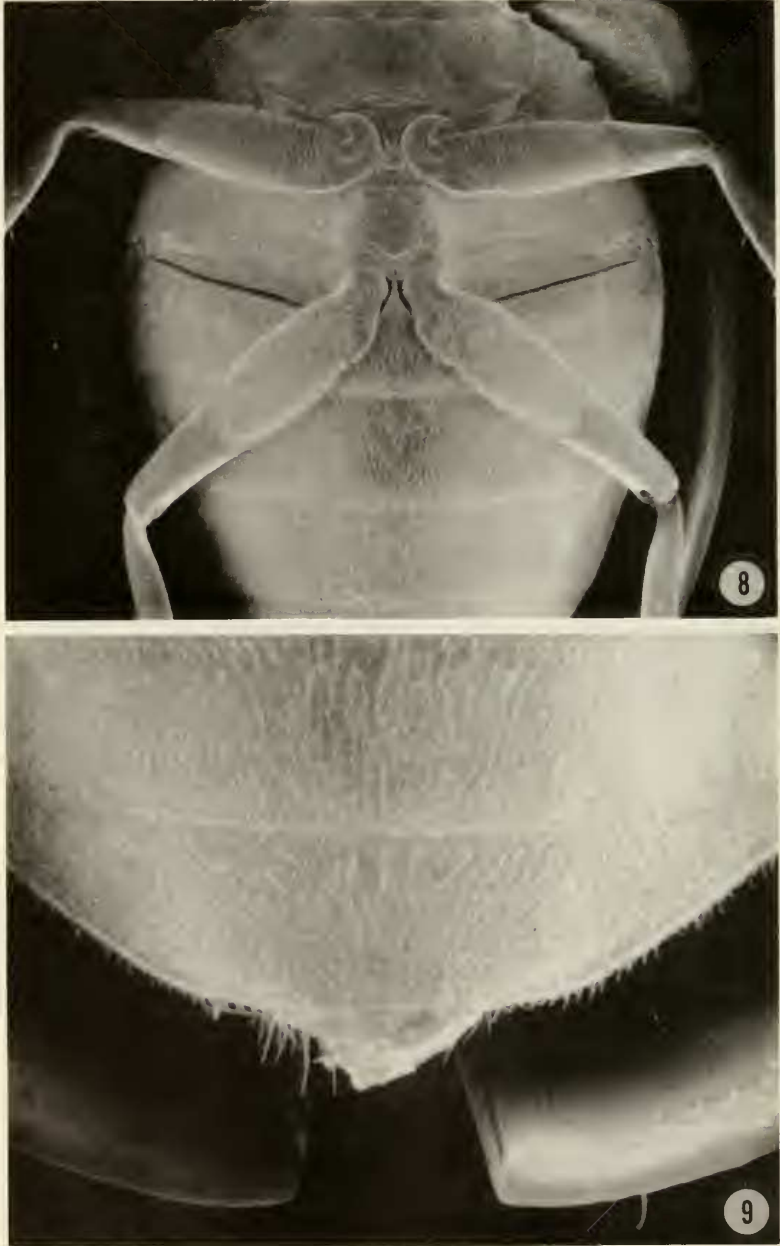


Figs. 4-5. *Troglodares ashmolei*. 4, Head, lateral, 175 $\times$ . 5, Labium, ventral, 400 $\times$ .



Figs. 6-7. *Troglodares ashmolei*. 6, Protibia, dorsal surface, 325 $\times$ . 7, Protibial apex, dorsal surface, 750 $\times$ .





Figs. 8-9. *Troglochaes ashmolei*. 8, Mesosternum and metasternum, 80 $\times$ . 9, Last abdominal sternum, 340 $\times$ .

*Abdomen:* Abdominal sterna microalutaceous; covered with short, moderately dense, golden hydrofuge pubescence; last sternum without apico-medial emargination (Fig. 9).

Male.—Unknown.

Type-data.—Holotype: ECUADOR, Morona-Santiago Province, Los Tayos Cave, 78°12'W, 3°06'S, 23 July 1976, Philip Ashmole; USNM type no. 76879, deposited in the U.S. National Museum of Natural History, Smithsonian Institution.

Etymology.—This unique species is named for the collector, Dr. Philip Ashmole.

Habitat.—According to a label included with the specimen it was collected from the "main cave, chamber above cascades, on calcite formations."

#### ACKNOWLEDGMENTS

I am deeply grateful to Philip Ashmole for allowing me to study his material and for kindly donating the unique specimen of *Troglochaes ashmolei* to the National Museum of Natural History, Smithsonian Institution. I also extend my thanks to Susann Braden, Smithsonian Institution scanning electron microscopist, for taking the micrographs included herein.

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